



LIEBHERR R934CEW 29333 - Hydraulic System

Sample No: LH0178230

Oil Type: KENDALL FOUR SEASONS AW ISO 46

DOMINION NICKEL ALLOYS LTD.

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Diagnosis

Resample at the next service interval to monitor.All component wear rates are normal. The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable. The condition of the oil is acceptable for the time in service.



SAMPLE INFORMATION

| Sample Number | LH0178230 | LH0224524 | LH0186969 | |
|---------------|-------------|-------------|-------------|------|
| Sample Date | 05 Jul 2023 | 20 Jul 2022 | 15 Apr 2021 | |
| Machine Hours | 17038 | 16000 | 15000 | |
| Oil Hours | 2038 | 1000 | 5000 | |
| Oil Changed | Not Changd | Not Changd | Changed | |
| Sample Status | NORMAL | NORMAL | ABNORMAL | |
| | | | | |

OIL CONDITION

| | 501 | 43.0 | 50.4 | 42.5 | |
|-------------|------|------------|------|------|--|
| Visc @ 40°C | ~\$t | 430 | 50.4 | 129 | |

CONTAMINATION

| Water | % | | | 0.015 | |
|-------------------|-----|-------------|----------------|-------------|--|
| Particles >4µm | | 7093 | 19224 | 66542 | |
| Particles >6µm | | • 754 | 2480 | • 19599 | |
| Particles >14µm | | • 15 | 60 | 1838 | |
| ISO 4406:1999 (c) | | 20/17/11 | 21/18/13 | 23/21/18 | |
| Silicon | ppm | ● <1 | <□ <1 | ◯ <1 | |
| Sodium | ppm | ● <1 | ● <1 | ● <1 | |
| Potassium | ppm | ● <1 | <1 | ○ <1 | |
| | | | | | |

WEAR METALS

Ø

| Iron | ppm | • 2 | 7 | 5 | | - |
|------------|-----|------|------|--------------------|---|------|
| Copper | ppm | ● <1 | 0 1 | 0 2 | | |
| Lead | ppm | • 0 | ● <1 | ● <1 | | |
| Tin | ppm | • 0 | 0 | 0 | | - |
| Aluminum | ppm | • 0 | ● <1 | ● <1 | | 1 |
| Chromium | ppm | 2 | 6 | 6 | | |
| Molybdenum | ppm | • 1 | 0 | ● <1 | | |
| Nickel | ppm | • 0 | 0 | ○ <1 | | |
| Titanium | ppm | 0 | 0 | 0 | | 1.0. |
| Silver | ppm | 0 | 0 | <1 | | |
| Manganese | ppm | 0 | <1 | <1 | | |
| Vanadium | ppm | 0 | 0 | 0 | 8 | |
| 11 | | | | THE R P. LEWIS CO. | | |

ADDITIVES

| Calcium | ppm | 5 7 | 68 | 94 | |
|------------|-----|------------|------|-----|--|
| Magnesium | ppm | 2 | ○ <1 | 2 | |
| Zinc | ppm | • 439 | 425 | 487 | |
| Phosphorus | ppm | • 365 | 338 | 382 | |
| Barium | ppm | • 0 | 0 | 0 | |
| Boron | ppm | ● <1 | ◯ <1 | 01 | |

Depot: Unique No: Signed: Report Date: DOMBUR 5607456 Kevin Marson 19 Jul 2023

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Particle Filter (Magn: 100 x)

LEBHERR CONSTRUCTION EQUIPMENT



GRAPHS



